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Sanders

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(54) **ITEM RECOMMENDATION**

(71) Applicant: **Amazon Technologies, Inc.**, Seattle, WA (US)

(72) Inventor: **Adam Callahan Sanders**, New York, NY (US)

(73) Assignee: **Amazon Technologies, Inc.**, Seattle, WA (US)

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(51) **Int. Cl.**

G06Q 30/06	(2012.01)
G06Q 30/02	(2012.01)
H04L 12/58	(2006.01)

(52) **U.S. Cl.**
CPC ***G06Q 30/0631*** (2013.01); ***G06Q 30/0201*** (2013.01); ***H04L 51/046*** (2013.01); ***H04L 51/32*** (2013.01)

(58) **Field of Classification Search**
CPC H04L 51/046; H04L 51/32; G06Q 10/10; G06Q 30/0631; G06Q 30/0201
See application file for complete search history.

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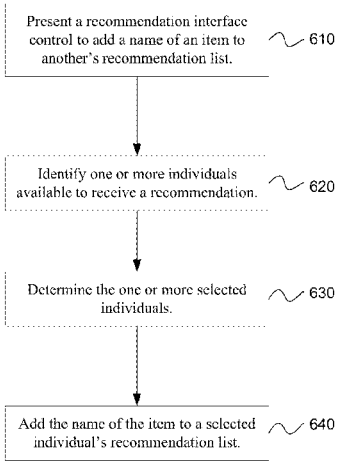
Primary Examiner — Michael C Lai
(74) *Attorney, Agent, or Firm* — Thorpe North & Western LLP

(57) **ABSTRACT**

A technology is described for making a recommendation for an item. An example method may include identifying a user interest in an item and identifying individuals that may have an interest in the item. The individuals may be presented to a user via a recommendation interface control that allows a name of the item to be added to a recommendation list for an individual selected from the individuals. An individual selected from the individual list to receive the recommendation may be identified and the name of the item may be added to the recommendation list for the individual.

18 Claims, 10 Drawing Sheets



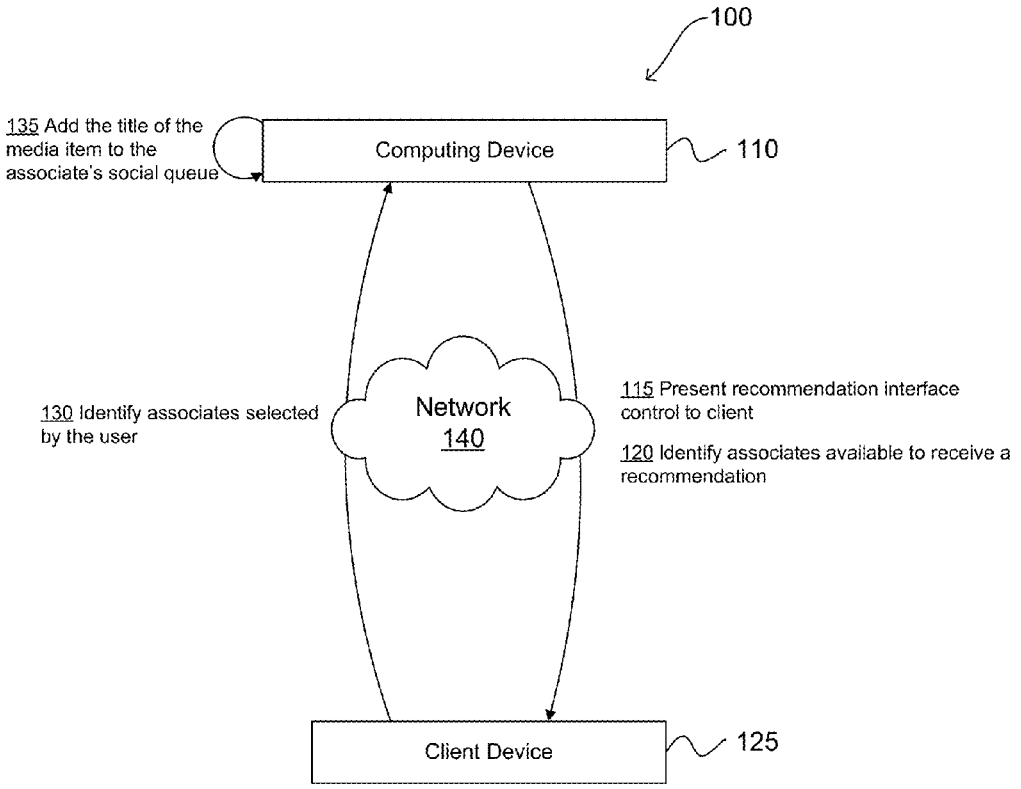

100
135 Add the title of the media item to the associate's social queue
Computing Device
110
130 Identify associates selected by the user
Network
140
115 Present recommendation interface control to client
120 Identify associates available to receive a recommendation
Client Device
125

FIG. 1

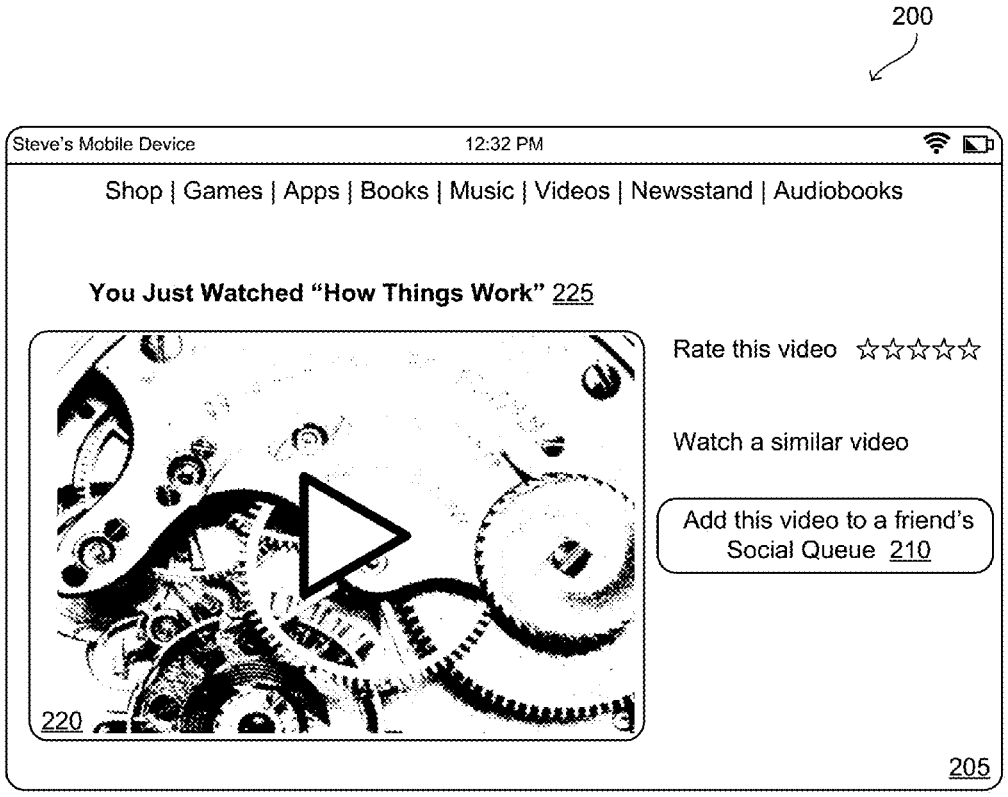

200
Steve's Mobile Device
12:32 PM
Shop | Games | Apps | Books | Music | Videos | Newsstand | Audiobooks
You Just Watched "How Things Work" 225
Rate this video ☆☆☆☆☆
Watch a similar video
Add this video to a friend's Social Queue 210
220
205

FIG. 2a

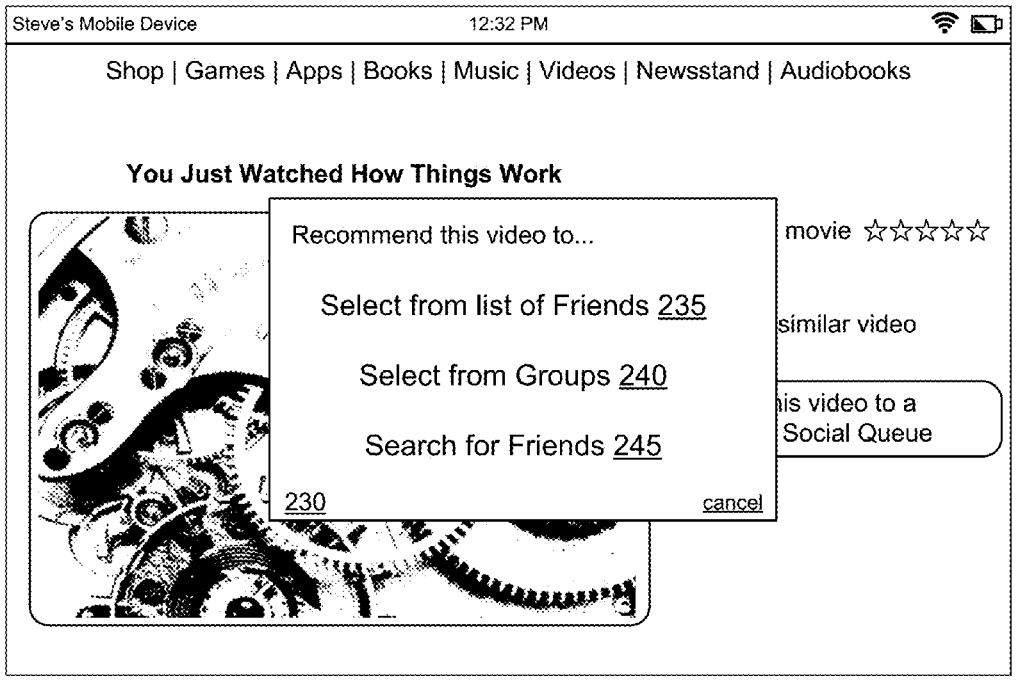

Steve's Mobile Device
12:32 PM
Shop | Games | Apps | Books | Music | Videos | Newsstand | Audiobooks
You Just Watched How Things Work
Recommend this video to...
Select from list of Friends 235
Select from Groups 240
Search for Friends 245
230
cancel
movie ☆☆☆☆☆
similar video
is video to a
Social Queue

FIG. 2b

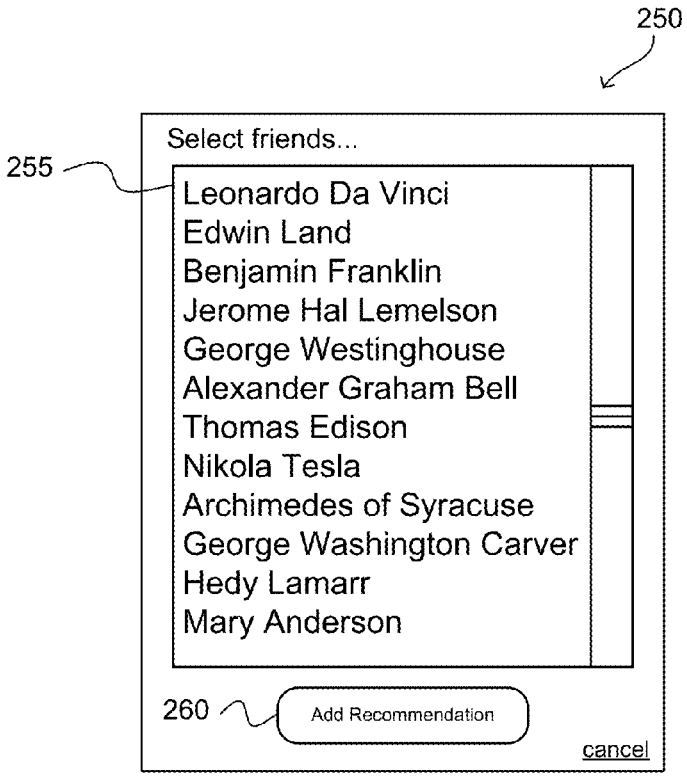

250
Select friends...
255
Leonardo Da Vinci
Edwin Land
Benjamin Franklin
Jerome Hal Lemelson
George Westinghouse
Alexander Graham Bell
Thomas Edison
Nikola Tesla
Archimedes of Syracuse
George Washington Carver
Hedy Lamarr
Mary Anderson
260
Add Recommendation
cancel

FIG. 2c

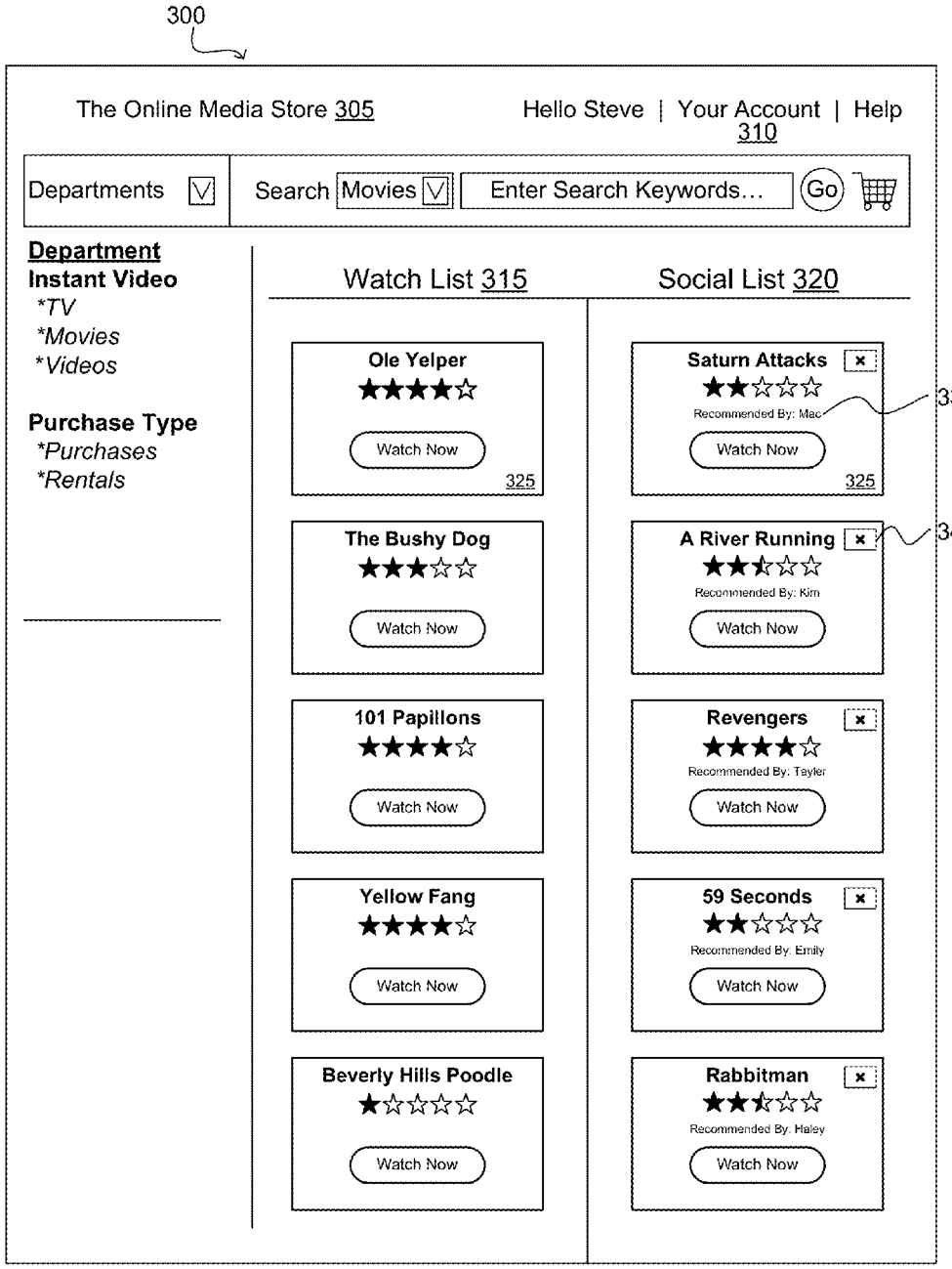

300
The Online Media Store 305
Hello Steve | Your Account | Help
310
Departments
Search Movies
Enter Search Keywords...
Go
Department
Instant Video
*TV
*Movies
*Videos
Purchase Type
*Purchases
*Rentals
Watch List 315
Social List 320
Ole Yelper
Watch Now
325
Saturn Attacks
Recommended By: Mac
Watch Now
325
335
The Bushy Dog
Watch Now
A River Running
Recommended By: Kim
Watch Now
340
101 Papillons
Watch Now
Revengers
Recommended By: Tayler
Watch Now
Yellow Fang
Watch Now
59 Seconds
Recommended By: Emily
Watch Now
Beverly Hills Poodle
Watch Now
Rabbitman
Recommended By: Haley
Watch Now

FIG. 3

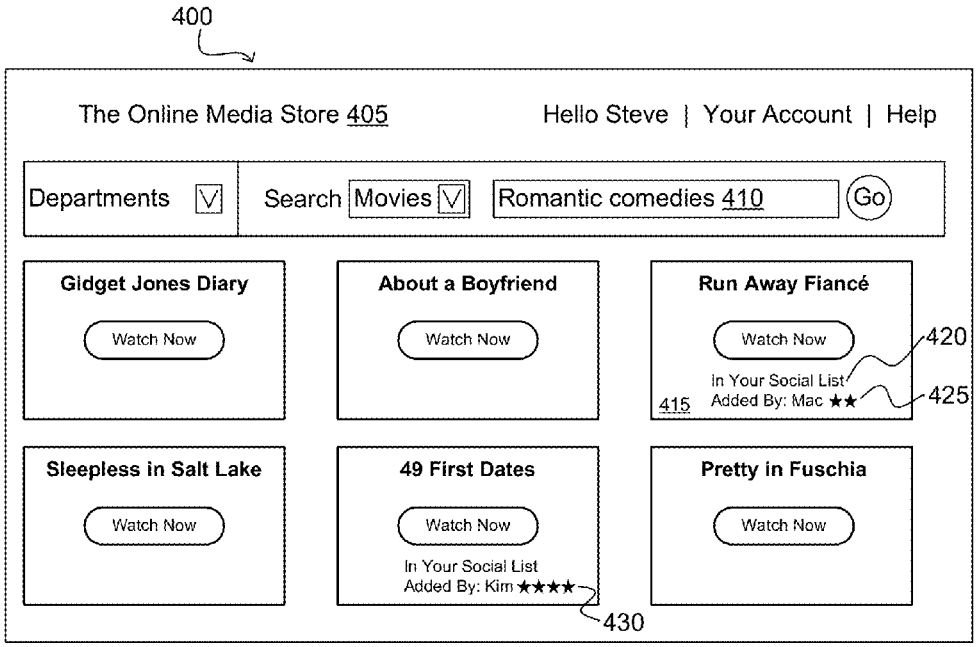

400
The Online Media Store 405
Hello Steve | Your Account | Help
Departments
Search Movies
Romantic comedies 410
Go
Gidget Jones Diary
Watch Now
About a Boyfriend
Watch Now
Run Away Fiancé
Watch Now
420
In Your Social List
415
Added By: Mac ★★
425
Sleepless in Salt Lake
Watch Now
49 First Dates
Watch Now
In Your Social List
Added By: Kim ★★★★
430
Pretty in Fuschia
Watch Now

FIG. 4

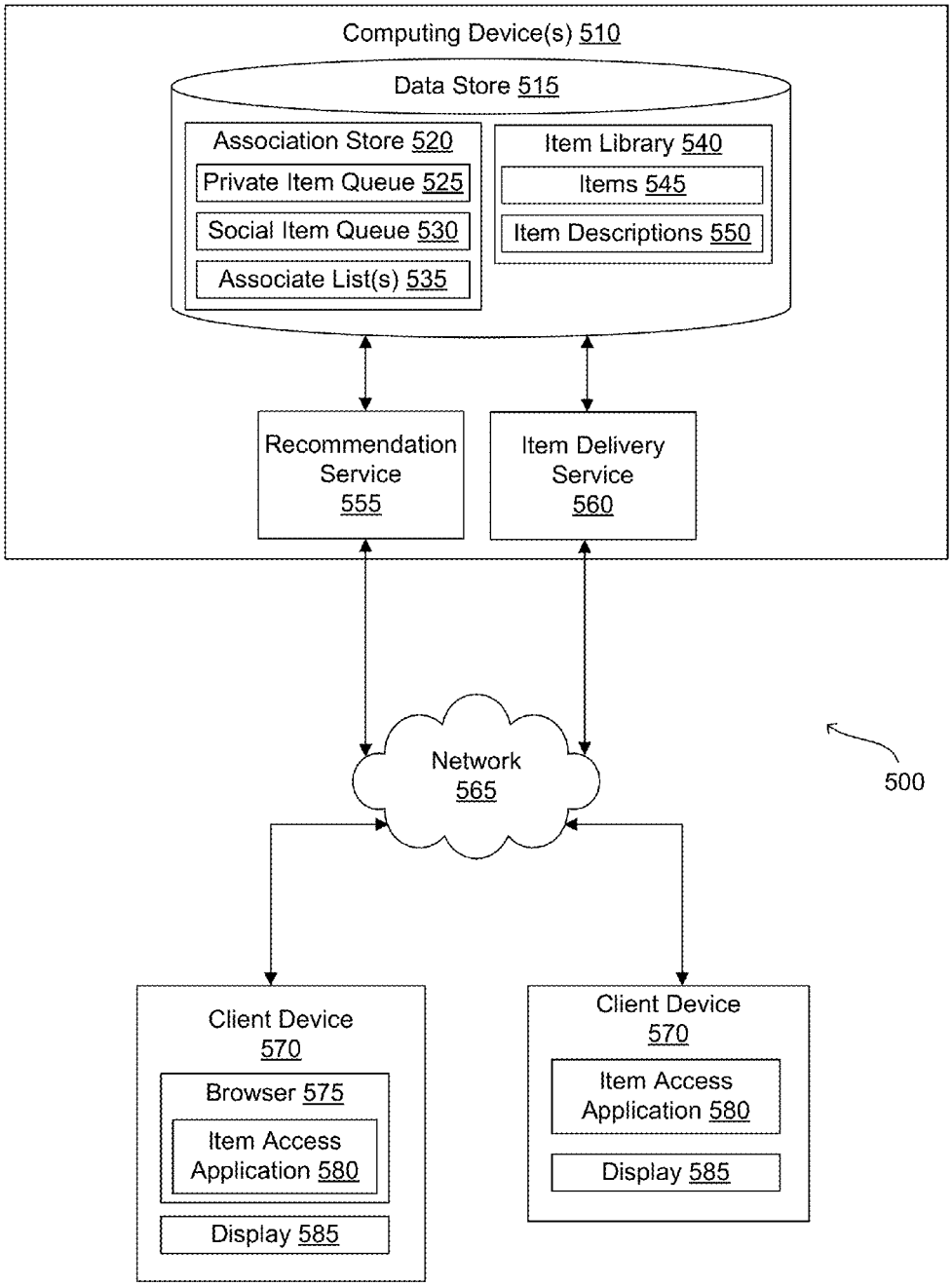

Computing Device(s) 510
Data Store 515
Association Store 520
Private Item Queue 525
Social Item Queue 530
Associate List(s) 535
Item Library 540
Items 545
Item Descriptions 550
Recommendation Service 555
Item Delivery Service 560
Network 565
500
Client Device 570
Browser 575
Item Access Application 580
Display 585
Client Device 570
Item Access Application 580
Display 585

FIG. 5

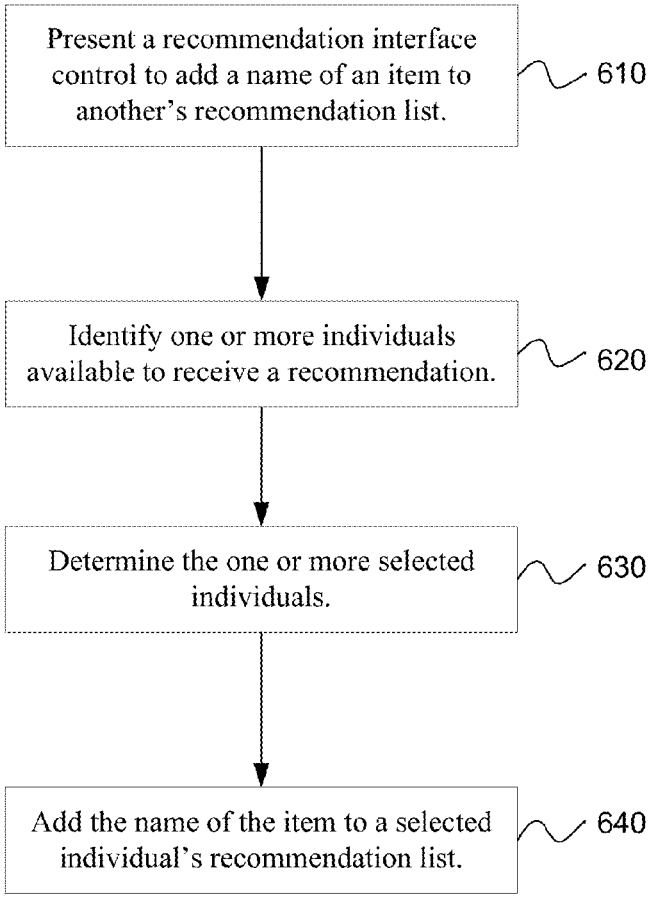

Present a recommendation interface control to add a name of an item to another's recommendation list.
610
Identify one or more individuals available to receive a recommendation.
620
Determine the one or more selected individuals.
630
Add the name of the item to a selected individual's recommendation list.
640

FIG. 6

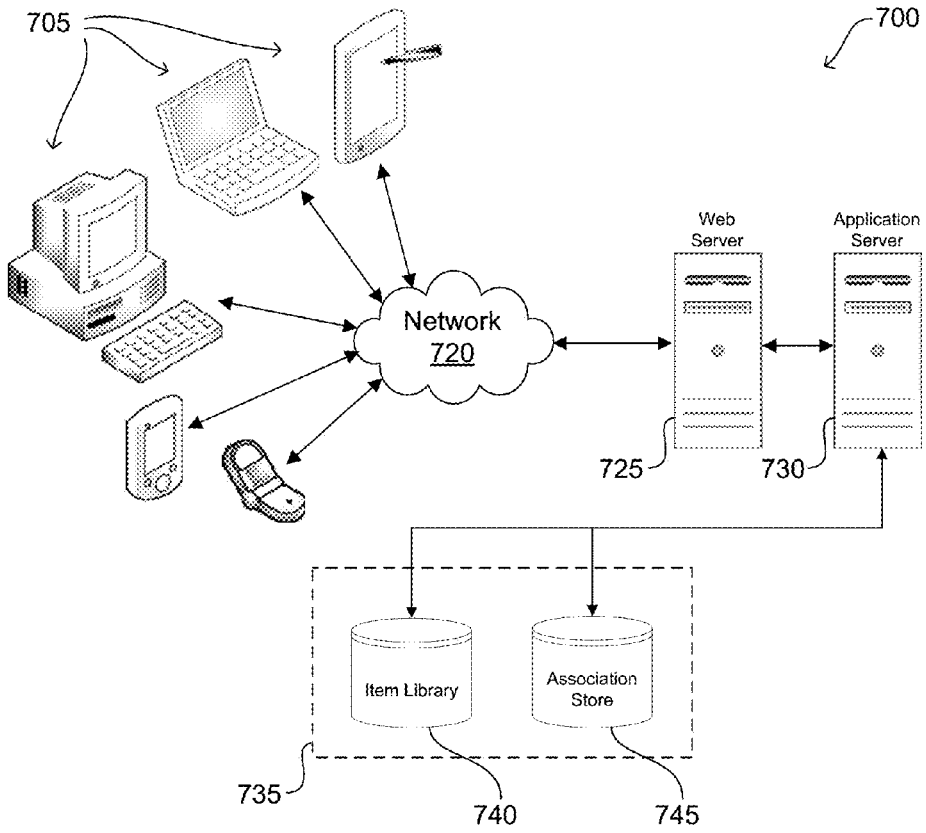

705
700
Web Server
Application Server
Network
720
725
730
Item Library
Association Store
735
740
745

FIG. 7

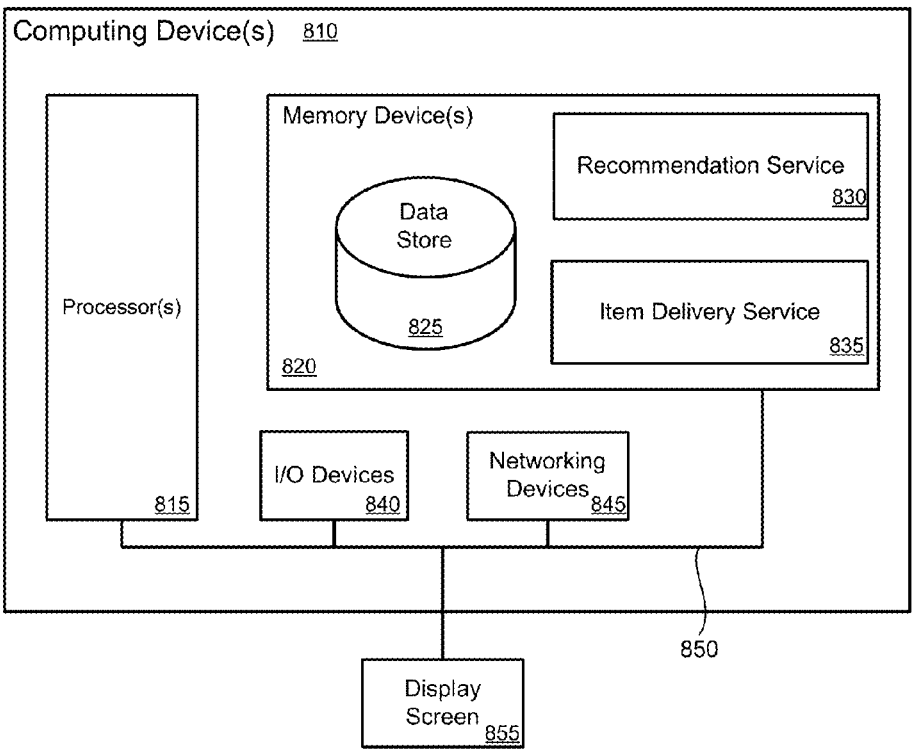

Computing Device(s) 810
Memory Device(s)
Recommendation Service
830
Data
Store
825
Item Delivery Service
835
820
Processor(s)
815
I/O Devices
840
Networking
Devices
845
850
Display
Screen
855

FIG. 8

ITEM RECOMMENDATION

PRIORITY DATA

This application is a continuation of U.S. Pat. No. 9,246,866, filed Dec. 6, 2012, to which priority is claimed.

BACKGROUND

The ability to share recommendations with others has evolved well beyond just passing along a recommendation by word of mouth. Many recommendation options are now available that may include among others methods: sending a recommendation to one or more persons via email, texting, instant message, or posting a recommendation on a social networking site. For example, a recommender may want to recommend a movie that the recommender has just finished watching online. The recommendation may be sent to a friend in an email or the recommender might post the recommendation to a social networking site. Although convenient, these methods have drawbacks that may result in the recipient not taking advantage of the recommendation.

Drawbacks may include recommendations that are lost or forgotten by the recipient, or where the intended recipient may not have viewed the recommendation. For example, recommendations sent in an email may end up in an inbox cluttered with junk mail and other non-related messages. Then to later use the email containing the recommendation, the recipient may need to search the inbox to find the recommendation. In another scenario involving email, the recipient's mailbox may become so overwhelmed by the number of emails containing recommendations that the recipient may be unable or unwilling to keep up with the volume. In another situation concerning social media, recommendations posted to a social networking site may quickly become stale as new postings are made, and those who occasionally log into the site may not see the recommendation.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a diagram illustrating a method for recommending a media item.

FIG. **2***a*-**2***c* are illustrations that depict examples of user interfaces associated with item recommendation.

FIG. **3** is a drawing that depicts an example of a page illustrating access to content and associated recommendations.

FIG. **4** is a drawing that depicts an example of a page illustrating access to content and a recommendation success rate.

FIG. **5** is a block diagram illustrating an example system for recommending an item.

FIG. **6** is flowchart illustrating an example of a method for recommending an item.

FIG. **7** is a schematic diagram illustrating an example environment for implementing the technology to recommend an item.

FIG. **8** is block diagram illustrating an example of a computing device that may be used for recommending an item.

DETAILED DESCRIPTION

A technology is described to allow a recommender to make recommendations to others for items that the recommender has consumed. For example, at the conclusion of viewing a video streamed over the internet, a user may want to recommend the video to others that the user has reason to believe would also want to watch the video. Using the system that the user used to watch the video, the user at the conclusion of the video may be presented with an option that enables the user to select one or more of the user's associates. An associate may be a friend, a family member, work associate, or just an acquaintance of the user. After the user has selected an associate, the title of the video then may be placed in a list or queue that belongs to the associate but the list is open to others so that others may place recommendations into the list. The next time the associate logs into the associate's account, the title of the video that the user added to the associate's recommendation list may be available to the associate. The terms list and queue, may be used interchangeable throughout this discussion.

In addition to recommending videos, as further described below, recommendations may be made for various other types of media such as movies, TV programs, music, audio books or any other type of media that a user may consume via the system. Also recommendations for retail items may be added to an associate's recommendation list. For example, while shopping at an online retailer, a user may have purchased an item that the user knows a friend has been looking for at a certain price. At the conclusion of the checkout process, the user may be presented with a dialog that enables the user to select the friend from a number of the user's friends and associates and make a recommendation to the friend that the friend buy the item. The name of the recommended item may then be added to the friend's social item queue alerting the friend that the item has been recommended by the user.

FIG. **1** provides an example of a networked computing environment **100** illustrating item recommendation. The networked environment **100** may include one or more computing devices **110** that are in data communication with one or more client devices **125** by way of a network **140**. The network **140** may include an intranet, the Internet, a local area network, a wide area network, a wireless data network, or any other network or combination thereof. Communication over the network may be enabled by wired or wireless connections and combinations thereof. A client device **125** may be, but not limited to, a desktop computer, a laptop, a television, a car navigation system, or any device with a display that may receive and present the page content. Additionally, the client device **125** may be a mobile device. In one example, the mobile device is a tablet device, a cell phone, a laptop computer, an electronic book reader, set-top box, game console, heads up display (HUD) glasses, or another mobile computing device.

In this example, a user that has accessed an item using a client device **125** may, as in **115**, be presented with a recommendation interface control that may be executed using the client device **125**. The recommendation interface control may be presented from the computing device **110** over a network **140** to the client device **125**. For example, a user that has accessed a movie using a mobile device may be presented with a dialog that gives the user the ability to send a recommendation for the movie to an associate. The recommendation interface control may be presented after the user has finished watching the movie, after the user pauses the movie, after the user stops the movie, and/or after the user has purchased the movie. As a further example, a user may watch a portion of a movie and be inspired to share a recommendation with an associate who the user believes would be interested in the movie. Rather than making the recommendation after the movie has finished, the user may

instead want to pause the movie and make the recommendation while the thought is fresh in the user's mind. In another example, should the user decide not to watch the entire movie, the user may still recommend the movie to an associate despite having not finishing the movie.

As in **120**, at least one associate that may be available to receive a recommendation may be identified. The identification of at least one associate may be sent from the computing device **110** over a network **140** to the client device **125**. For example, associates that the user interacts frequently with may be cached in the computing device **110** and may be identified as being available to receive a recommendation. The user's associates may be stored as an unorganized list of associates, stored alphabetically, listed by priority, listed by number of recommendations, or the user may organize the user's associates into a group of associates defined by an associate's relationship to the user. To illustrate, associates may be grouped according to a family relationship, or some other relationship such as coworker, sports team member, or student. By organizing associates into groups, the process in **120** may identify the groups as available to receive a recommendation.

In another example, a group of associates may be identified where the user belongs to a group of associates having an interest in a topical category that is shared among the group of associates. In other words, the user may join a group where a topical category that the user enjoys is shared among the group. To illustrate, a user that enjoys cooking may join a group that has a topical category of "cooking". Members of this group may recommend to each other cooking videos, instructional cooking TV shows, cooking audio books, etc. When the operation in **120** identifies associates available to receive a recommendation and the topical category of the media item accessed is "cooking", the operation may identify the "cooking" group as being available to receive a recommendation.

As in **130**, associates selected by the user may be identified and sent over a network **140** from the client device **125** to the computing device **110**. Selected associates may entail one associate, or may comprise a plurality of associates. For example, the user may want to recommend a nature video which the user accessed to the user's associates Bob and Jim. The user may select Bob and Jim from the list of available associates and the operation in **130** may identify Bob and Jim as being selected to receive the recommendation. Also, as described above, associates may be grouped together allowing a user to select a group of associates that then may be identified by the process in **130**. Borrowing from the example above where a user belongs to a group having a media category of "cooking", the user may have watched a cooking instructional video and now may want to share the video with the cooking group. The user may select the cooking group and the operation in **130** may identify the group as being selected to receive the recommendation.

As in **135**, after the selected associates have been identified, the title of the item accessed by the user may be added to the selected associate's social queue, thereby making a recommendation for the item to the selected associates. A social queue may be a queue that belongs to an associate. The associate's social queue may be made available to the user for receiving recommendations (and probably not for viewing by anyone besides the associate) so that recommendations for items may be added to the social queue. A recommendation may be added to a social queue by placing the title of an item into the associate's social queue. As an example, a user who accessed a TV series may want to recommend the TV series to a coworker. After selecting the coworker, the name of the TV series then may be added to the coworker's social queue, resulting in a recommendation for the TV series made to the coworker. A similar recommendation may be made for a purchased item. Where a user has purchased a new garlic press, the user may receive an email later with a request to provide a review on the garlic press product. The email may also include an interface (e.g. button) to recommend the garlic press to an associate if they liked the garlic press.

In addition, a recommendation may be added to a plurality of social queues for a group of associates. For example, as described above, associates may be grouped based upon an associate's relationship to the user. When a user selects a group of associates, the title of the media item may be added to the social queues of the group. To illustrate, where a group of family members may be composed of a brother, sister and cousin, the title of the media item may be added to the brother's social queue, the sister's social queue and the cousin's social queue.

As is described above, a user may join a group of associates having an interest in a media category that is shared among the group of associates. The title of a media item may be added to a social queue that is shared by the group of associates. Again using the example of the media category of "cooking", a user may add a media item titled "cooking made easy" to a social queue that is accessible to the members of the cooking group.

In an example, subsequent to adding a title of an item to an associate's social queue, the title of the item may be presented to the associate when the associate's social queue is next accessed by the associate. In other words, the next time that the associate accesses the associate's social queue, the title of the item may be visible to the associate.

In another example, subsequent to adding a title or name of an item to an associate's social queue, the associate may be presented with an acceptance interface control **340** (e.g., accept or reject buttons) that may allow the associate to accept the recommendation. To illustrate, a user may have added a title of a movie to the associate's social queue that the user enjoyed. Using a client device **125**, the associate may accept the movie recommendation and the movie title may remain in the associate's social queue. Should the associate not have an interest in watching the recommended movie, the associate may decline to accept the recommendation and the title of the movie may be removed from the associate's social queue.

In an example where the user may want to include a text comment with a recommendation, the text comment along with the title of a media item may be added to an associate's social queue. When the associate next accesses the associate's social queue, the text comment may be available to the associate to read. To illustrate, a user may want to recommend a movie to a friend, but may want to warn the friend about a certain scene in the movie. The user may include the comment "Great movie, but the shower scene was terrifying". The comment along with the movie title "Psycho" may be added to the friend's social queue for the user to accept or reject.

In addition to an associate accessing the associate's social queue to view recommendations made to the associate, a visual indicator may be incorporated into a media item description that informs an associate that the user has added the title of the media item to the associate's social queue. To illustrate, as an associate browses through movie descriptions looking for a movie that the associate may want to watch, a visual indicator such as text or an icon may be

incorporated into the movie description letting the associate know that the movie is in the associate's social queue.

Moving now to FIG. **2***a*, an example of a user interface **205** is depicted as may be rendered by a client device **200**. In this example, the client device **200** may be a mobile device such as a smartphone or tablet computer. The user interface may include an integrated media player for displaying and playing a media file **220**, an interface control for displaying the title **225** of the media that the user accessed and a button **210** for recommending the media title to a friend. In this example, the user of the client device **200** has consumed a video. The title **225** indicates that the user has just watched a video entitled "How Things Work". Upon consuming the video, the button **210** may be presented to the user enabling the user to add the title of the video file to a friend's social queue.

FIG. **2***b* provides a further example of a user interface where a user has selected the button **210** (FIG. **2***a*) to add a video to a friend's social queue. The user is presented with a selection interface control **230** containing a menu. The menu items may include options to "Select from list of friends" **235**, "Select from groups" **240**, or "Search for friends" **245**. The option to "Select from list of friends" **235** may present to the user a list of friends and the user then may choose from the list. Whereas the option to "Select from groups" **240** may present to the user a list of groups that the user may have created or groups that have been predefined. Last, the option to "Search for friends" **245** may enable the user to search a data store for the user's friends or to find individuals that the user would like to add as friends.

FIG. **2***c* depicts an example interface control **250** that may be rendered on a client device subsequent to selecting a menu option from the selection interface control **230** (FIG. **2***b*). The interface control **250** may contain a list of friends **255** that are available to receive a recommendation for the video consumed by the user. The user may choose one or more friends from the list and then select the add recommendation button **260** to add the recommendation to the friend's social queue.

FIG. **3** is one example of a page **300** as rendered by a client device. In this non-limiting example, a user is logged into an online retail media store **305** and is presented with a page that contains the user's account **310** information. The account information may include a user's watch list **315** and a user's social list **320**. The user's watch list **315** may contain a list of media titles **325** that the user has added to the list. The user's watch list **315** may be a list of media titles **325** that the user has an interest in viewing. The watch list **315** may be exclusive to the user where the user may add and remove media titles **325** from the list and the user may view the contents of the list. Whereas the social list **320** may or may not be open to other individuals who the user has granted permission to add media titles **325** to the social list. Media titles **325** added to the user's social list may include the name of the recommender **335**.

Another example page **400** as rendered by a client device is illustrated in FIG. **4**. Shown is an online retail media store **405** where a user may search or browse for a movie. A number of movie choices **415** may be presented to the user from which the user may make a selection. A movie choice **415** may include a visual indicator **420** that may alert a user that a recommender may have added the movie choice **415** to the user's social list.

Also a recommendation success rate **425** may be displayed along with the recommender's name. A recommender may be assigned a success rate where the success rate is determined by the number of recommendations that are accepted or rejected by an associate or referred user. For example, a user may accept or reject a recommendation that may be added to the user's social list. When a recommendation is accepted by the user, the success rate of the recommender may increase. The inverse may be true for recommendations that are rejected by the user causing the recommender's success rate to decrease. A higher success rate may indicate to a user that recommendations made by the recommender may be of value as compared to recommenders with low success rates. A success rate **425** may be displayed as a star rating, an award rating, a percentage, or by any visual depiction that may show the success of recommendation acceptance. For example, in FIG. **4** the recommender Mac has a two star success rate **425**, whereas the recommender Kim has a four star success rate **430**. Kim's recommendation success rate **430** may be higher as indicated by the number of stars as compared to Mac's recommendation success rate **425** of two stars.

FIG. **5** provides an example of a networked computing environment **500** for this technology. The networked computing environment **500** may include one or more computing devices **510** in data communication with one or more client devices **570** by way of a network **565**. The network **565** may include any useful computing network, including an intranet, the Internet, a local area network, a wide area network, a wireless data network, or any other such network or combination thereof. Components utilized for such a system may depend at least in part upon the type of network and/or environment selected. Communication over the network may be enabled by wired or wireless connections and combinations thereof.

The computing devices **510** may comprise, for example, a server computer or any other system providing computing capability. Alternatively, a plurality of computing devices **510** may be employed that are arranged, for example, in one or more server banks or computer banks or other arrangements. For purposes of convenience, the computing device **510** is referred to in the singular, it is understood that a plurality of computing devices **510** may be employed in the various arrangements as described above.

Various processes and/or other functionality may be executed in the computing environment **500** according to various embodiments. Also, various data may be stored in a data store **515** that is accessible to the computing device **510**. The term "data store" may refer to any device or combination of devices capable of storing, accessing, organizing and/or retrieving data, which may include any combination and number of data servers, relational databases, object oriented databases, cloud storage systems, data storage devices, data warehouses, flat files and data storage configuration in any centralized, distributed, or clustered environment. The storage system components of the data store **515** may include storage systems such as a SAN (Storage Area Network), cloud storage network, volatile or non-volatile RAM, optical media, or hard-drive type media. The data store **515** may be representative of a plurality of data stores **515**.

The data stored in the data store **515** may include, for example, an association store **520** and an item library **540**. The association store **520** may include a private item queue **525**, a social item queue **530** and associate lists **535**. A private item queue **525** may be a queue that is owned by a user. A watch list **315** (FIG. **3**) may be an example of a private item queue **525** and similarly, a private item queue **525** may be such that the user may add items or remove items from the queue and the queue itself and the items contained within the queue are visible to the user alone. An

example of media items that may be contained in a private item queue **525** may include items such as movie titles, TV titles, video titles, audio book titles, and/or any other type of media item that may be referenced by placing a description in a queue. For example, while a user is browsing through a media library catalog, the user may come across a movie that the user is interested in viewing sometime in the future. The user may add the title of the movie to the user's private item queue **525** so that the user may come back to the private item queue **525** at a later time to find the movie reference when the user is ready to view the movie. Another example of items that may be added to a private item queue **525** are retail product and service descriptions of items such as household item names, clothing items, electronic items, physical goods, online services, local services that may be available to purchase from an online retailer and that the user may want to purchase at a later date. For example, a user may be shopping for a particular item but the user is not ready to make a purchase until the item is offered at a lower price. The user may add the item to the user's private item queue **525** and reference the queue when the item is offered at a price that is acceptable to the user. And in another example, a user may want to add a service item to the user's private item queue **525**, for instance an online music service that the user may be interested in but is not ready to subscribe to. It will be appreciated that a private item queue **525** may contain a combination of media items, retail product items and/or service items, or that a plurality of private item queues **525** may be created allowing for queues that contain media items separately and queues that contain retail product items separately.

A social item queue **530** may be a queue that is owned by the user, but may or may not be visible to the user's associates and may be open to receive recommendations from the associates so that the associates may add recommendations for items by adding the name of an item to the user's social item queue **530**. A social list **320** (FIG. **3**) as described above may be an example of a social item queue **530**. Recommendations for items added to the user's social item queue **530** by the user's associates may then be available to the user via the social item queue **530**. Examples of recommended items that may be added to the social item queue **530** are the same as those items that may be added to a user's private item queue **525**, as explained above.

A user's associates may be stored in the association store **520** in an associate list **535**. An associate may be a user's friend, family member, coworker, electronic acquaintance or any other person having a relationship with the user. In one example, a user may add an associate to the associate list **535**, and in another example an associate may make a request to the user to add the associate to the associate list **535**.

Associates may be grouped or categorized within the associate list **535** by the user depending upon the user's preferences. A user may set up groupings where associates are grouped together based upon the relationship of the associate to the user. For example, a user may want to group the associates based upon the user's relationship to the associate, such as by family member, coworker, church member, etc. For instance, a user may want a group that includes immediate family members so that the user may recommend items that are relevant to the family's immediate circumstances. Also a user may want an associate group that contains members of the user's softball team, enabling the user to recommend purchase items that pertain to the sport of softball. As will be appreciated, the number of possible groups that the user may create may be vast, giving the user the flexibility to tailor recommendations to a specific circumstance or preference of a group. Further, the user may save time making recommendations to a group of associates by selecting the group rather than selecting each associate individually.

In addition to establishing groups of associates, a user may categorize associates based upon some other type of designation. Associates may be categorized based on interests such as those who enjoy horror movies, or those who enjoy the outdoors, etc. Categorizing associates may enable the user to make directed recommendations to a specific category of associates. For example, suppose a user has created a category of associates who are horror movie enthusiasts. After viewing a horror movie that the user thought was exceptionally scary, the user may add a recommendation for the horror movie to the plurality of social item queues **530** for a group of associates that the user has categorized as "horror movie lovers". As was described above, categorizing associates may save the user time, the user may simply select a category, for instance "horror movies", and the recommendation then may be made to the user's associates who are in that category.

The item library **540** may include items **545** and item descriptions **550**. Items **545** may include media items, services and various products that a user may purchase or rent from an online retailer. Item descriptions **550** may include descriptions of a plurality of items, for example movies, videos, TV programs, user submitted video, audio books, podcasts, electronic books, electronic magazines, electronic periodicals, etc. To illustrate, a movie description may include the title of the movie. Item descriptions **550** may also include other details about the media, such as authors, performers, dates, ratings, reviews or other descriptions associated with the media. For example, an item description **550** for a movie may include the movie title, release date, film rating, genre, summary, cast and run time. These movie details may form an item description **550** that may be included with a recommendation made to an associate. Item descriptions **550** may also contain a plurality of descriptions for varying products and services that may be available to purchase from an online retailer. Item descriptions **550** may primarily contain the names of products and services, but may also include additional details such as color, weight, country of origin, quantity, price, shipping information or any other information that may be associated with the product or service. For example, a product description for a backpack may include the backpack's brand, color, material type, number of pockets, price, and shipping information. This information may form an item description **550** that may be included with a recommendation of the backpack to an associate. In another example, the item description may be for a service such as an online music service that may include service details like monthly price, available music file formats, terms and conditions, etc. These details may be included in a recommendation for the online music service.

A recommendation service **555** may be executed in the computing device **510** that applies logic allowing a user to provide a recommendation to an associate. The logic run by the recommendation service **555** may first determine the item most recently consumed on a client device **570**. Where the item most recently consumed is a movie for example, the logic may determine that the item consumed is a media item and that the description for the item may be found in the item library **540** within the item descriptions **550**. In another example where the item consumed is a product or service, the logic may determine that the item description may also

be found in the item library **540** within the item descriptions **550**. Information about the item determined by the logic may be held in memory and made available to subsequent logic and processes.

Next, logic may send a plurality of associates from the association store **520** to the client device **570**. As described above, associates may be grouped into associate groups based on an associate's relationship to the user, or associates may be categorized based upon the interests of the associate. The logic may send a group of associates, a category of associates, and/or a list of the user's associates from the association store's **520** associate list **535** to the client device **570**. In one example where the user has consumed a horror movie, the logic may send to the client device **570** a categorized group of associates that have been categorized as horror movie enthusiasts based upon the associate's consumption patterns. In another example, a user may have purchased a book about financial security and the logic may send the client device **570** a group of associates designated as a family group. And yet another example may be where a user may have purchased a board game for social gatherings and the logic may send to the client device **570** a general list of associates (e.g., social friends).

After the plurality of associates are sent to the client device **570**, logic then may obtain a selection of an associate from the plurality of associates from the client device **570**. For example, after logic may send a plurality of associates (i.e., an associate listing) to the client, a user may then choose those associates that the user desires to send a recommendation. Using the client device **570**, the user then may select the associate, and the selection then may be obtained by the recommendation service **555**. After the associate that the user selected has been obtained, logic then may store a name of the item recommended in a selected associate's social item queue **530**. Further, where a user has selected a plurality of associates to share an item recommendation, the item name may be stored in a plurality of social item queues **530** owned by the plurality of associates.

In another example, the recommendation service **555** may further comprise logic that obtains a text comment entered by a user. The text comment then may be stored in the selected associate's social item queue **530** along with the name or title of the recommended item. To illustrate, in addition to sending an associate a recommendation for an item, the user may want to include a comment that goes along with the recommendation. For example, if the user is recommending a horror movie that the user found especially scary, the user may want to include a comment warning the associate that the user found the movie to be more frightening than what was expected.

An item delivery service **560** may instruct physical delivery of items **545** from the item library **540** to a client device **570** over a network **565**. The network **565** may include any useful computing network, including an intranet, the Internet, a local area network, a wide area network, a wireless data network, or any other such network or combination thereof.

A client device **570** may be a device such as, but not limited to, a desktop computer, a laptop, a tablet, a mobile device, a television, a cell phone, a smartphone, a hand held messaging device, a set-top box, a gaming console, a personal data assistant, an electronic book reader, heads up display (HUD) glasses, a car navigation system, or any device with a display that may receive and present the media content. The client device **570** may be used to view items **545** by means of an item access application **580** that may communicate with the item delivery service **560** over the network **545**. An item **545** may be viewed by a user on a display **585**. In some examples, the client device **570** may include a browser **575** that may be coupled with an item access application **580**. The browser **575** may enable a user to access an item **545** using the browser **575**.

Certain processing services may be discussed in connection with this technology. In one example configuration, a service may have one or more processes executing on a server or other computer hardware. Such services may be centrally hosted functionality or a service application that may receive requests and provide output to other services or consumer devices. For example, services may be considered on-demand computing that is hosted in a server, cloud, grid, or cluster computing system. An application program interface (API) may be provided for each service to enable a second service to send requests to and receive output from the first service. Such APIs may also allow third parties to interface with the service and make requests and receive output from the service.

FIG. **6** is a flow diagram illustrating one example of a technology to recommend an item. As is shown in box **610**, after a user has consumed an item (i.e., viewed or listened to a media file, and/or purchased or rented a product or service.), a recommendation interface control may be presented to a user allowing a user to add a name of the item to another's recommendation list. For example, after a user has consumed an item, an interface control may be presented to the user on a client device. The client device may be a desktop computer, laptop, tablet, smartphone, cellular phone, etc. The item consumed by the user may include a media file, an item that the user has purchased from an online retailer, a service, or any other item that a user may consume using a client device. The recommendation interface control may allow the user to share a recommendation for the item by activating or selecting the control. Depending upon the client device, a number of different actions may activate the recommendation interface control, such as clicking, touching (e.g., in a touch sensitive device), pointing, selecting, as well as other actions.

As is shown in box **620**, individuals available to receive a recommendation are identified and made available to the user to select. For example, after the user has activated the recommendation interface control in the previous operation, an individual who is willing to receive a recommendation from the user may be identified and presented to the user. The individual may be a friend, family member, coworker, or any other person who has given the user permission to add recommendations to the associate's recommendation list. In addition, a group of individuals defined by an individual's relationship to the user may be identified. For example, a user may create a group of individuals that comprises of family members, or a group of coworkers. As may be appreciated, a user may create any number of groups with whom the user may want to share recommendations.

In addition, group of individuals may be identified where an individual's consumption patterns may be similar to the consumption patterns of other individuals within the group. Consumption patterns may reveal information that identifies an individual's preferences. For instance, an individual's consumption patterns may indicate that the individual prefers movies that are categorized as romantic comedies. The individual may be identified along with other individuals that have a preference for movies that are romantic comedies. The individuals may form a group of individuals that include the user, who have a common preference. In addition, the consumption patterns of the group may reveal an item category that is the same as the item category of the

item. In other words, the common preference that is similar to individuals among the group matches the item category of the item the user consumed. For example, where the user has consumed a movie that has a category of romantic comedies, individuals in the group identified in the process above may have a preference for romantic comedies. The group then may be presented to the user to select an individual's name from the next operation.

In another example, the user may have individuals that follow or subscribe to recommendations that the user may make. For example, a user may be a celebrity, or may be someone who is known within a community, or may simply have a following of individuals. The individuals that subscribe to a user's recommendations may be identified so that the individuals are available to the user to select. For example, a user may be a well-known film critic that may share recommendations for movies that the film critic highly recommends. The individuals that may subscribe to the film critic's recommendations may be identified and presented to the film critic in a user interface to allow the film critic to select one or more of these individuals to receive the film critic's recommendation. Thus, where the film critic may want to recommend the movie "To Kill a Mockingbird" to the film critic's subscribers, the individuals that subscribe to the film critic's recommendations may be identified and made available to the film critic to select.

As is shown in box **630**, an individual that the user may have selected may be identified. Using a client device, the user may select the individual that the user wishes to share an item recommendation with. The individual that the user has selected may then be identified by the process. In addition to selecting an individual, the user may select a plurality of individuals or a group of individuals as described above.

As is shown in box **640**, the name of the item that the user may be recommending may be added to the selected individual's recommendation list. For example, where the user recently consumed a media item, the name of the media item may be added to a recommendation list that belongs to the individual selected by the user in the previous process.

A recommendation list may contain a number of recommendations from a plurality of recommenders. Recommendations may be for anything that a recommender may consume on the client device. In addition to adding the name of an item to a recommendation queue, a user may add a text comment along with the name of the item to the individual's recommendation queue. For example, a user may add the text comment "Thought you might like this" to a recommendation for a product that the user believes an individual may be interested in. The text comment along with the name of the item may be added to the individual's recommendation list.

In addition, where a group of individuals defined by an individual's relationship to the user may have been selected by the user, the name of the item may be added to one recommendation list that is accessible to the group of individuals. For example, where the group selected by the user is comprised of the user's family members, the user may add a name of an item to a recommendation list that is accessible to the family member group. Where the grouping of individuals is accomplished by using an individual's consumption pattern information, the name of the item may be added to a plurality of recommendation queues for the group. For example, individuals of the group may receive the recommendation in the individual's own recommendation queue.

In another example, a visual indicator may be incorporated into an item's description informing an individual that the item has been added to the individual's recommendation queue. To illustrate, while browsing for new items to purchase, download or rent, a visual indicator may inform an individual viewing the item description that the item has been added to the individual's recommendation list. Specifically, highlighted text, an icon, or an animation may notify the individual that the item has been added to the individual's recommendation queue. The visual indicator may allow the individual to know what has been recommended prior to accessing the individual's recommendation queue.

While the flow diagrams illustrated in FIG. **6** may imply a specific order of execution, the order of execution may differ from what is illustrated. For example, the order of two or more blocks may be rearranged relative to the order shown. Further, two or more blocks shown in succession may be executed in parallel or with partial parallelization. In some configurations, one or more blocks shown in the flow chart may be omitted or skipped. Any number of counters, state variables, warning semaphores, or messages might be added to the logical flow for purposes of enhanced utility, accounting, performance, measurement, troubleshooting or for similar reasons.

FIG. **7** is an example of an environment **700** for implementing the current technology. As will be appreciated, although a web-based environment is used for the purposes of explanation, different environments may be used to implement various examples. The environment **700** includes a client device **705**, which may include any device capable of sending and receiving information over a network **720**. Examples of a client device **705** include personal computers, tablet computers, laptop computers, smartphones, cellular phones and the like. The network **720** may include any appropriate network, including an intranet, the Internet, a cellular network, a local area network, or any other network or combination thereof. Communication over the network may be enabled by wired or wireless connections, and combinations thereof. The example environment **700** includes a web server **725** for receiving requests and serving content in response thereto. As would be apparent, an alternative server device serving a similar purpose may be used for other types of networks.

The example environment **700** includes at least one application server **730** and a data store **735**. It should be understood that several application servers, layers, or other elements, processes, or components may be used that may interact to perform tasks such as obtaining data from a data store. The data store **735** may be representative of a plurality of data stores as can be appreciated. The application server **730** may provide access control services in cooperation with the data store and may be able to generate content such as text, graphics, audio, and/or video to be transferred or made available to the user, which may be served to the user by the web server **725** in the form of HTML, XML, or another appropriate structured language. Handling of all requests, responses and delivery of content between the client device **705** and the application server **730** may be handled by the web server **725**.

The data store **735** may include data tables, databases, or other storage mechanisms and media for storing data relating to this technology. In this example, the data store **735** may include mechanisms for storing an item library **740** and an association store **745**, as described earlier. The stored information may be used to serve content to client devices

705. The data store 735 may also include a mechanism for storing information received from the client devices 705.

The example environment 700 is a distributed computing environment utilizing several computer systems and components that are interconnected via communication links, using one or more computer networks or direct connections. It will be appreciated that such a system may operate equally well in a system having fewer or greater number of components than are illustrated in FIG. 7. Thus the depiction of the environment 700 should be taken as being illustrative in nature and not limiting to the scope of the disclosure.

FIG. 8 illustrates a computing device 810 on which modules of this technology may execute. A computing device 810 is illustrated on which a high level example of the technology may be executed. The computing device 810 may include one or more processors 815 that are in communication with memory devices 820. The computing device 810 may include a local communication interface 850 for the components in the computing device. For example, the local communication interface may be a local data bus and/or any related address or control busses as may be desired.

The memory device 820 may contain modules that are executable by the processor(s) 815 and data for the modules. Located in the memory device 820 are modules executable by the processor. For example, a recommendation service module 830, a data item deliver service module 835 and other modules may be located in the memory device 820. The modules may execute the functions described earlier. A data store 825 may also be located in the memory device 820 for storing data related to the modules and other applications along with an operating system that is executable by the processor(s) 815.

Other applications may also be stored in the memory device 820 and may be executable by the processor(s) 815. Components or modules discussed in this description that may be implemented in the form of software using high programming level languages that are compiled, interpreted or executed using a hybrid of the methods.

The computing device may also have access to I/O (input/output) devices 840 that are usable by the computing devices. An example of an I/O device is a display screen 855 that is available to display output from the computing devices. Other known I/O device may be used with the computing device as desired. Networking devices 845 and similar communication devices may be included in the computing device. The networking devices 845 may be wired or wireless networking devices that connect to the internet, a LAN, WAN, or other computing network.

The components or modules that are shown as being stored in the memory device 820 may be executed by the processor(s) 815. The term "executable" may mean a program file that is in a form that may be executed by a processor 815. For example, a program in a higher level language may be compiled into machine code in a format that may be loaded into a random access portion of the memory device 820 and executed by the processor 815, or source code may be loaded by another executable program and interpreted to generate instructions in a random access portion of the memory to be executed by a processor. The executable program may be stored in any portion or component of the memory device 820. For example, the memory device 820 may be random access memory (RAM), read only memory (ROM), flash memory, a solid state drive, memory card, a hard drive, optical disk, floppy disk, magnetic tape, or any other memory components.

The processor 815 may represent multiple processors and the memory 820 may represent multiple memory units that operate in parallel to the processing circuits. This may provide parallel processing channels for the processes and data in the system. The local interface 850 may be used as a network to facilitate communication between any of the multiple processors and multiple memories. The local interface 850 may use additional systems designed for coordinating communication such as load balancing, bulk data transfer and similar systems.

While the flowcharts presented for this technology may imply a specific order of execution, the order of execution may differ from what is illustrated. For example, the order of two more blocks may be rearranged relative to the order shown. Further, two or more blocks shown in succession may be executed in parallel or with partial parallelization. In some configurations, one or more blocks shown in the flow chart may be omitted or skipped. Any number of counters, state variables, warning semaphores, or messages might be added to the logical flow for purposes of enhanced utility, accounting, performance, measurement, troubleshooting or for similar reasons.

Some of the functional units described in this specification have been labeled as modules, in order to more particularly emphasize their implementation independence. For example, a module may be implemented as a hardware circuit comprising custom VLSI circuits or gate arrays, off-the-shelf semiconductors such as logic chips, transistors, or other discrete components. A module may also be implemented in programmable hardware devices such as field programmable gate arrays, programmable array logic, programmable logic devices or the like.

Modules may also be implemented in software for execution by various types of processors. An identified module of executable code may, for instance, comprise one or more blocks of computer instructions, which may be organized as an object, procedure, or function. Nevertheless, the executables of an identified module need not be physically located together, but may comprise disparate instructions stored in different locations which comprise the module and achieve the stated purpose for the module when joined logically together.

Indeed, a module of executable code may be a single instruction, or many instructions and may even be distributed over several different code segments, among different programs and across several memory devices. Similarly, operational data may be identified and illustrated herein within modules and may be embodied in any suitable form and organized within any suitable type of data structure. The operational data may be collected as a single data set, or may be distributed over different locations including over different storage devices. The modules may be passive or active, including agents operable to perform desired functions.

The technology described here may also be stored on a computer readable storage medium that includes volatile and non-volatile, removable and non-removable media implemented with any technology for the storage of information such as computer readable instructions, data structures, program modules, or other data. Computer readable storage media include, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tapes, magnetic disk storage or other magnetic storage devices, or any other computer storage medium which may be used to store the desired information and described technology.

The devices described herein may also contain communication connections or networking apparatus and networking connections that allow the devices to communicate with other devices. Communication connections are an example of communication media. Communication media typically embodies computer readable instructions, data structures, program modules and other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. A "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal. By way of example and not limitation, communication media includes wired media such as a wired network or direct-wired connection and wireless media such as acoustic, radio frequency, infrared and other wireless media. The term computer readable media as used herein includes communication media.

Reference was made to the examples illustrated in the drawings and specific language was used herein to describe the same. It will nevertheless be understood that no limitation of the scope of the technology is thereby intended. Alterations and further modifications of the features illustrated herein and additional applications of the examples as illustrated herein are to be considered within the scope of the description.

Furthermore, the described features, structures, or characteristics may be combined in any suitable manner in one or more examples. In the preceding description, numerous specific details were provided, such as examples of various configurations to provide a thorough understanding of examples of the described technology. It will be recognized, however, that the technology may be practiced without one or more of the specific details, or with other methods, components, devices, etc. In other instances, well-known structures or operations are not shown or described in detail to avoid obscuring aspects of the technology.

Although the subject matter has been described in language specific to structural features and/or operations, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features and operations described above. Rather, the specific features and acts described above are disclosed as example forms of implementing the claims. Numerous modifications and alternative arrangements may be devised without departing from the spirit and scope of the described technology.

Reference was made to the examples illustrated in the drawings and specific language was used herein to describe the same. It will nevertheless be understood that no limitation of the scope of the technology is thereby intended. Alterations and further modifications of the features illustrated herein and additional applications of the examples as illustrated herein are to be considered within the scope of the description.

Furthermore, the described features, structures, or characteristics may be combined in any suitable manner in one or more examples. In the preceding description, numerous specific details were provided, such as examples of various configurations to provide a thorough understanding of examples of the described technology. One skilled in the relevant art will recognize, however, that the technology may be practiced without one or more of the specific details, or with other methods, components, devices, etc. In other instances, well-known structures or operations are not shown or described in detail to avoid obscuring aspects of the technology.

Although the subject matter has been described in language specific to structural features and/or operations, it is to be understood that the subject matter defined in the appended claims is not necessarily limited to the specific features and operations described above. Rather, the specific features and acts described above are disclosed as example forms of implementing the claims. Numerous modifications and alternative arrangements may be devised without departing from the spirit and scope of the described technology.

What is claimed is:

1. A non-transitory machine readable storage medium having instructions embodied thereon, the instructions when executed by a processor:

identify an item for which a user has indicated an interest;

identify a consumption pattern for the user;

analyze the consumption pattern for a preference for items associated with an item category of the item;

identify a group of individuals that are available to receive an item recommendation who have consumption patterns that have the preference for items associated with the item category of the item;

present a recommendation interface control that includes the group of individuals, wherein the recommendation interface control allows a name of the item to be added to a recommendation list for an individual selected from the group of individuals;

identify the individual that is selected from the group of individuals to receive the recommendation;

prompt the user to enter a user text comment associated with the item, via the recommendation interface control; and

add the name of the item, a description of the item, and the user text comment to the recommendation list for the individual, thereby recommending the item to the individual.

2. A non-transitory machine readable storage medium as in claim **1**, wherein the instructions that when executed by the processor further identify the group of individuals using in part a relationship of the individual to a user.

3. A non-transitory machine readable storage medium as in claim **1**, wherein the instructions that when executed by the processor further add the name of the item to a social queue that is accessible to the group of individuals.

4. A non-transitory machine readable storage medium as in claim **1**, wherein the instructions that when executed by the processor further add the name of the item to a plurality of social queues for the group of individuals.

5. A computer implemented method, comprising:

identifying an item for which a user has indicated an interest, using a processor;

identifying a topical category for the item, using the processor;

identifying a group of individuals having an interest in the topical category who are available to receive an item recommendation for the item, using the processor;

presenting a recommendation interface control that includes the group of individuals, wherein the recommendation interface control allows a name of the item to be added to a recommendation list for an individual selected from the group of individuals;

identifying the individual selected from the group of individuals to receive the recommendation, using the processor;

prompting the user to enter an user text comment associated with the item, via the recommendation interface control, using the processor; and

adding the name of the item, a description of the item, and the user text comment to the recommendation list for the individual, using the processor.

6. A method as in claim **5**, further comprising identifying the group of individuals using in part a relationship of the individuals included in the group of individuals to a user.

7. A method as in claim **5**, further comprising assigning a success rate to a user according to a success rate that is determined by a number of recommendations that are accepted by the individual.

8. The method as in claim **5**, wherein adding the name of the item to the recommendation list for the individual further comprises adding the name of the item to a recommendation list that is accessible to the group of individuals.

9. The method as in claim **5**, wherein adding the name of the item to the recommendation list for the individual further comprises adding the name of the item to a plurality of recommendation lists for the group of individuals.

10. The method as in claim **5**, wherein identifying the group of individuals further comprises identifying a group of individuals that subscribe to a recommendation list maintained by a user.

11. A method as in claim **5**, further comprising receiving an acceptance of a recommendation from the individual that results in adding the name of the item to a watch list for the individual.

12. A method as in claim **5**, further comprising presenting the recommendation list with the name of the item when the recommendation list is accessed by the individual.

13. The method as in claim **5**, wherein identifying the item for which the user has indicated the interest further comprises determining that the user has purchased the item.

14. The method as in claim **5**, wherein identifying the item for which the user has indicated the interest further comprises determining that the user has viewed the item.

15. A system comprising:

a processor;

a memory device including instructions that, when executed by the processor, cause the system to:

identify an item for which a user has indicated an interest;

identify a group of individuals that are available to receive an item recommendation;

present a recommendation interface control that includes the group of individuals and allows a name of the item to be added to a recommendation list for an individual selected from the group of individuals;

identify the individual that is selected from the group of individuals to receive the recommendation;

prompt the user to enter an user text comment associated with the item, via the recommendation interface control; and

add the name of the item, a description of the item, and the user text comment to the recommendation list for the individual.

16. A system as in claim **15**, wherein the memory device includes instructions that, when executed by the processor, causes the system to obtain a text comment entered by a user via the recommendation interface control.

17. A system as in claim **15**, wherein the memory device includes instructions that, when executed by the processor, causes the system to display the name of the item and the text comment in a social queue for the individual.

18. A system as in claim **15**, wherein the memory device includes instructions that, when executed by the processor, causes the system to execute an acceptance interface control that enables the individual to accept a recommendation added to the recommendation list for the individual, wherein acceptance of the recommendation adds the name of the item to a watch list associated with the individual.

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